Access DB# 68087

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Lisa V. Cook Examiner #: 77134 Date: 6/4/02
Art Unit: 1641 Phone Number 30 5-0828 Serial Number: 09/623,383
Mail Box and Bldg/Room Location: 7e-12 CM1 Results Format Preferred (circle): PAPER/DISK E-MAIL
Office 7B-17 CM1 MEJ

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Affinity Fluorescent proteins and uses thereof

Inventors (please provide full names): Paul T. Matsudaira, Daniel J. Ehrlich, Guihui Zhong Freyzon, Y

Earliest Priority Filing Date: 7/29/99

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

See attached claims + bib sheet.

microparticle, bead
magnetic particle
adduct -> covalent binding
label / separation reagent
binding protein
ELISA, assay
nitrenarylazide
electromagnetics

Thank you Lisa. ☺

RECEIVED JUN -5 2002 TECHNOLOGY CENTER (STIC)

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STAFF USE ONLY

Searcher: D. Schreiber
Searcher Phone #: 308-4292
Searcher Location: CM1 6A03
Date Searcher Picked Up: 6/17
Date Completed: 6/24
Searcher Prep & Review Time: 15
Clerical Prep Time:
Online Time: 43

Type of Search

NA Sequence (#)
AA Sequence (#)
Structure (#)
Bibliographic ✓
Litigation
Fulltext
Patent Family
Other

Vendors and cost where applicable

STN
Dialog 273, 61
Questel/Orbit:
Dr.Link
Lexis/Nexis
Sequence Systems
WWW/Internet
Other (specify)

PTO-1590 (1-2000)

ANSWER 3 OF 11 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:296076 CAPLUS
DN 138:315791
ED Entered STN: 17 Apr 2003
TI Fusions of random peptide libraries in scaffold proteins such as green fluorescent protein or β-lactamase
IN Anderson, David; Peelle, Beau Robert; Bogenberger, Jakob Maria
PA Rigel Pharmaceuticals, Inc., USA
SO U.S., 63 pp., Cont.-in-part of U.S. 6,180,343.
CODEN: USXXAM
DT Patent
LA English
IC ICM C07K004-00
ICS C07K014-435; C12Q001-68; C12N015-63; C12N015-12
NCL 530300000; 530350000; 435006000; 435320100; 536023400; 536023500
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 9
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6548632	B1	20030415	US 1999-415765	19991008
	US 6180343	B1	20010130	US 1998-169015	19981008
	US 6548249	B1	20030415	US 2000-626581	20000727
	US 6562617	B1	20030513	US 2000-626580	20000727
	US 2001003650	A1	20010614	US 2000-749959	20001227
	US 6596485	B2	20030722		
	US 2003143562	A1	20030731	US 2002-177725	20020620
	US 2003224412	A1	20031204	US 2003-393449	20030318
PRAI	US 1998-169015	A2	19981008		
	US 1999-415765	A3	19991008		
	US 2002-177725	A2	20020620		

check dates for 1997

AB The invention relates to the use of scaffold proteins, particularly green fluorescent protein (**GFP**) and β-lactamase TEM-1, in fusion constructs with random and defined peptides and peptide libraries. The fusions act to increase the cellular expression levels, decrease the cellular catabolism, increase the conformational stability relative to linear peptides, and increase the steady state concns. of the random peptides and random peptide library members expressed in cells for the purpose of detecting the presence of the peptides and screening random peptide libraries. N-terminal, C-terminal, dual N- and C-terminal, and one or more internal fusions are all contemplated. Internal fusions in Renilla **GFP** may be made in loops 1-5 (amino acid residues 130-135, 154-159, 172-175, 188-193, or 208-216) for optimal presentation of the peptide. Inclusion of multiple highly flexible amino acid residues between **GFP** and the library allows minimal conformational constraints on the **GFP**. Designed insertion sites in loops 2-4 retain a high level of **GFP** fluorescence when the inserts are flanked by multiple glycines in the tetrapeptide linkers. Novel fusions utilizing self-binding peptides to create a conformationally stabilized fusion domain are also contemplated. — Amy S/H.

ST scaffold protein fusion random peptide library; green fluorescent protein fusion random peptide library; lactamase fusion random peptide library

IT Animal cell line
(293, **GFP** fusions expressed in; fusions of random peptide libraries in scaffold proteins such as green fluorescent protein or β-lactamase)

IT Aequorea
Renilla reniformis
(**GFP** from; fusions of random peptide libraries in scaffold proteins such as green fluorescent protein or β-lactamase)

IT Animal cell line
(JURKAT, **GFP** fusions expressed in; fusions of random peptide

3/4 Buders Locker

libraries in scaffold proteins such as green fluorescent protein or β-lactamase)

IT Antigen presentation
Peptide library
(fusions of random peptide libraries in scaffold proteins such as green

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show files
File 155:MEDLINE(R) 1966-2002/Jun W3
File   5:Biosis Previews(R) 1969-2002/Jun W3
         (c) 2002 BIOSIS
File 315:ChemEng & Biotec Abs 1970-2001/Dec
         (c) 2002 DECHEMA
File  73:EMBASE 1974-2002/Jun W3
         (c) 2002 Elsevier Science B.V.
File 399:CA SEARCH(R) 1967-2002/UD=13626
         (c) 2002 AMERICAN CHEMICAL SOCIETY
File 351:Derwent WPI 1963-2002/UD,UM &UP=200239
         (c) 2002  Thomson Derwent
?ds

Set     Items   Description
S1    1000754   PARTICLE? ? OR MICROPARTICLE? ?
S2     118385   COVALENT?
S3     126569   ADDUCT?
S4    4309636   RECEPTOR? ? OR LIGAND? ? OR ANTIBOD? OR IMMUNOGLOBULIN? ?
S5    1722292   SPERM?
S6    1475454   MAGNETIC?
S7     257608   CENTRIFUG?
S8     898817   FILTER? OR FILTRAT?
S9      54084   AZIDE? ?
S10     16559   PHOTOAFFINIT?
S11     13089   PHOTOACTIV?
S12    345158   CROSSLINK? OR CROSS()LINK?
S13    310556   CONJUGAT?
S14       480   AU=MATSUDAIRA P? OR AU=MATSUDAIRA, P?
S15       609   AU=EHRLICH D? OR AU=EHRLICH, D?
S16       726   AU=ZHONG Q? OR AU=ZHONG, Q?
S17        31   AU=FREYZON Y? OR AU=FREYZON, Y?
S18      1795   S14-S17
S19        30   S1 AND S18
S20    615670   AFFINIT?
S21    822522   FLUORESCEN?
S22         4   S19 AND S4
S23         2   RD S22 (unique items)
S24     10936   S1 (5N) S4
S25      1041   NITROAZID? OR NITRO(3N)AZIDE? ?
S26         1   S24 AND S25
S27       134   S24 (5N) (S2 OR S3 OR S10-S13)
S28         1   S27 AND S5
S29       573   S1 (5N) S5
S30        63   S29 AND (S6-S8)
S31        39   RD S30 (unique items)
S32        11   S31 AND (DNA OR NUCLEIC OR DEOXYRIBONUCLEIC)
S33        11   RD S32 (unique items)
S34         6   S33 NOT (SPERMINE OR SPERMIDINE)
S35        97   S1 (5N) (S10 OR S11)
S36         5   S35 AND (S6-S8)
S37         5   RD S36 (unique items)
S38        13   S23 OR S26 OR S28 OR S34 OR S37
?t 38/7/all

 38/7/1     (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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09544215 97431230 PMID: 9285323

Silane-coated silica particle colloid processing of human sperm .

Perez S M; Chan P J; Patton W C; King A

Department of Gynecology and Obstetrics, Loma Linda University School of Medicine, California 92350, USA.

Journal of assisted reproduction and genetics (UNITED STATES) Aug 1997, 14 (7) p388-93, ISSN 1058-0468 Journal Code: 9206495

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

PURPOSE: The purpose of this study was to determine differences in the quality of human sperm processed through different lots of silane-coated silica particle colloid solutions. The objectives were to compare (a) sperm kinematic parameters, (b) the sperm acrosome status, (c) the membrane integrity of the head and tail regions, (d) the DNA normality, and (e) the heat-inducible hyperactivation motility after processing sperm through either a Silane-coated silica particle colloid solution, a Percoll solution, or a simple centrifuge sperm wash (control). METHODS: Sperm cells were derived from pooled cryopreserved-thawed specimens of several donors (n = 10). The pooled sperm were divided and processed through either the centrifuge wash, the 90:47% two-layer Percoll, or one of three lots of silane-coated silica particle colloidal solutions from three vendors. Aliquots of sperm cells were analyzed using the Hamilton-Thorn HTM-C motility analyzer for differences in kinematics and hyperactivation. Sperm were also analyzed for membrane integrity at both head and tail regions, normal morphology, acrosome status, and viability. Sperm undergoing apoptosis were determined using the acridine orange stain. Processed sperm were also incubated at 40 degrees C for 4 hr and the quality of the sperm was assessed using the heat-induced hyperactivation and motility parameter. RESULTS: The data showed that after sperm processing, the number of sperm recovered was higher for the three lots of colloids (silane-coated silica particle colloid solutions) compared with Percoll processing. Total sperm motility was higher in the colloidal washes compared with the control. There were no differences in motility between Percoll- and colloid-processed sperm. In contrast, the percentages of sperm exhibiting progressive motility or hyperactivation varied among the different lots of colloid solutions. The Percoll wash solution yielded the highest percentage of sperm with intact tail membranes, whereas some lots of colloid solutions disrupted sperm head membranes. The percentages of sperm undergoing apoptosis varied for the different lots of colloid solutions. There was a marked increase in hyperactivation associated with one colloid solution after heat induction. CONCLUSIONS: The results demonstrated variability in the different lots of silane-coated silica particle colloid solutions for processing sperm . Each lot of colloid solution excelled at improving different sperm parameters. The silane-coated silica particle colloid solutions were shown to be effective in recovering motile sperm compared with Percoll but the types of motility and sperm quality varied for the different lots of colloid solutions. Due to the variability in lots of silane-coated silica colloid solutions, reported studies based on only one lot or one source of colloid solution may be difficult to interpret. Furthermore, it may be advantageous to select the best lot of silane-coated silica particle colloid solution to produce the highest number of sperm exhibiting the ideal parameters for use in assisted reproduction technologies.

Record Date Created: 19971017

38/7/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09212112 97098948 PMID: 8943563
Induction of apoptosis by protease-defective particle preparations of human immunodeficiency virus type 1 is specific to a subset of U937-derived subclones.
Kameoka M; Kimura T; Zhong Q ; Zheng Y H; Luftig R B; Ikuta K
Section of Serology, Hokkaido University, Sapporo, Japan.
International immunology (ENGLAND) Nov 1996, 8 (11) p1687-97, ISSN 0953-8178 Journal Code: 8916182
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Several recent reports support the hypothesis that apoptosis occurring in leukocytes of human immunodeficiency virus type 1 (HIV-1)-infected individuals is important in progression to AIDS. Specifically, apoptosis of uninfected bystander cells appears critical in the pathogenesis of disease. Here, we present evidence that protease-defective, gp120-containing HIV-1 (L-2) particle preparations specifically induce apoptosis in cells obtained from a subset of promonocytic U937-derived subclones. The rate of apoptosis induction was inversely correlated with the susceptibility of the U937 subclones to wild-type HIV-1 infection. Three types of apoptosis experiments were performed: DNA content analysis by flow cytometry, apoptotic nuclear degradation by fluorescent microscopy and DNA fragmentation analysis by agarose gel electrophoresis. Kinetic analysis revealed that there was a slower induction of apoptosis by L-2 particle preparations than with tumor necrosis factor (TNF)-alpha or anti-Fas antibody . However, there were no significant differences in the initial binding rates of L-2 particles as well as the binding of TNF-alpha or anti-Fas antibody to the U937 subclones. The basal level of protein kinase C activity was higher in high-type subclones compared with low-type subclones. These results suggest that U937 cells can be divided into at least two subpopulations, one that permits a productive HIV-1 infection but is not subjected to L-2 particle preparation-induced apoptosis, while the other poorly replicates HIV-1 and is subjected to L-2 mediated apoptosis, although at a slower rate than found with TNF-alpha or anti-Fas antibody .

Record Date Created: 19970303

38/7/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04504314 84185806 PMID: 6609160
Roles of cytosol and cytoplasmic particles in nuclear envelope assembly and sperm pronuclear formation in cell-free preparations from amphibian eggs.
Lohka M J; Masui Y
Journal of cell biology (UNITED STATES) Apr 1984, 98 (4) p1222-30, ISSN 0021-9525 Journal Code: 0375356
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM

Record type: Completed

A cell-free cytoplasmic preparation from activated Rana pipiens eggs could induce in demembranated Xenopus laevis sperm nuclei morphological changes similar to those seen during pronuclear formation in intact eggs. The condensed sperm chromatin underwent an initial rapid, but limited, dispersion. A nuclear envelope formed around the dispersed chromatin and the nuclei enlarged. The subcellular distribution of the components required for these changes was examined by separating the preparations into soluble (cytosol) and particulate fractions by centrifugation at 150,000 g for 2 h. Sperm chromatin was incubated with the cytosol or with the particulate material after it had been resuspended in either the cytosol, heat-treated (60 or 100 degrees C) cytosol or buffer. We found that the limited dispersion of chromatin occurred in each of these ooplasmic fractions, but not in the buffer alone. Nuclear envelope assembly required the presence of both untreated cytosol and particulate material. Ultrastructural examination of the sperm chromatin during incubation in the preparations showed that membrane vesicles of approximately 200 nm in diameter, found in the particulate fraction, flattened and fused together to contribute the membranous components of the nuclear envelope. The enlargement of the sperm nuclei occurred only after the nuclear envelope formed. The pronuclei formed in the cell-free preparations were able to incorporate [3H]dTTP into DNA . This incorporation was inhibited by aphidicolin, suggesting that the DNA synthesis by the pronuclei was dependent on DNA polymerase-alpha. When sperm chromatin was incubated greater than 3 h, the chromatin of the pronuclei often recondensed to form structures resembling mitotic chromosomes within the nuclear envelope. Therefore, it appeared that these ooplasmic preparations could induce, in vitro, nuclear changes resembling those seen during the first cell cycle in the zygote.

Record Date Created: 19840530

38/7/4 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

02723584 BIOSIS NO.: 000068034180
A SENSITIVE MANUAL ENZYME IMMUNOASSAY FOR THYROXINE
AUTHOR: SCHALL R F JR; FRASER A S; HANSEN H W; KERN C W; TENOSO H J
AUTHOR ADDRESS: ORGANON DIAGN., P.O. BOX 5850, EL MONTE, CALIF. 91734, USA.
JOURNAL: CLIN CHEM 24 (10). 1978 (RECD. 1979). 1801-1804. 1978
FULL JOURNAL NAME: Clinical Chemistry
CODEN: CLCHA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: In the [human] serum thyroxine, [T4] assay specific antibody covalently bonded to latex particles was used, along with horseradish peroxidase [EC 1.11.1.7] as the label and o-phenylenediamine as the chromogen. The flexible protocol was designed for manual execution. Performance was similar to that of the highest-sensitivity T4 radioimmunoassays [RIA]. Results correlated well with RIA (r [correlation coefficient] = 0.99, slope = 0.93, y-intercept = 2.4 .mu.g/l for 201 samples) and an automated enzyme immunoassay (r = 0.97, slope = 0.99, y-intercept = 4.7 .mu.g/l for 105 samples). Between-assay and within-assay coefficients of variation were < 7.2% over the entire useful range of the assay (20-240 .mu.g/liter). The limit of detection was < 94

pg/tube at 20 .mu.g/l. Only D-T4 is known to interfere with serum assays. This assay had no discernible protein effect from 40-80 g of protein/l, unlike many T4 RIA. Serum preservatives known to be peroxidase inhibitors do not adversely affect assay performance because of the 56-fold dilution in the final assay mixture. Hemolyzed serum and EDTA-treated plasmas are unsuitable for this assay.

38/7/5 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

01999758 BIOSIS NO.: 000013019875
VIRUS-LIKE PARTICLES IN THE SPERM OF NORMAL MEN
AUTHOR: WITKIN S S; BENDICH A
JOURNAL: CLIN BULL (MEM SLOAN-KETTERING CANCER CENT) 6 (2). 1976 83 1976
FULL JOURNAL NAME: Clinical Bulletin (Memorial Sloan-Kettering Cancer Center)
CODEN: CLBUA
DOCUMENT TYPE: Meeting
RECORD TYPE: Citation

38/7/6 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

00301858 BIOSIS NO.: 000050116858
PURIFICATION AND PROPERTIES OF THE PHOTOACTIVE PARTICLE CORRESPONDING TO PHOTOSYSTEM II SPINACH-D CHLOROPLASTS INST SONICATION INST CENTRIFUGATION PIGMENTS CHLOROPHYLLS CAROTENOIDS PROTEIN NADP ELECTRON FLOW CYTOCHROMES PLASTO QUINONES LIPID PLASTO CYANIN
AUTHOR: HUZISIGE H; USIYAMA H; KIKUTI T; AZI T
JOURNAL: PLANT CELL PHYSIOL 10 (2). 441-455. 1969. 1969
CODEN: PLCPB
RECORD TYPE: Citation

38/7/7 (Item 1 from file: 351)
DIALOG(R)File 351:Derwent WPI

014122874
WPI Acc No: 2001-607086/200169
Light emitting composition for e.g. chemoluminescent, fluorescence and colorimetric assays, comprises a polymeric matrix with a photoactive compound, specific binding pair member and dopant
Patent Assignee: DADE BEHRING INC (DADE-N)
Inventor: PEASE J S; SADAKIAN J; SINGH S; ULLMAN E F; WAGNER D B
Number of Countries: 022 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200144811	A2	20010621	WO 2000US32361	A	20001127	200169	B

Priority Applications (No Type Date): US 99465065 A 19991215
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes

WO 200144811 A2 E 76 G01N-033/53
Designated States (National): CN IN JP
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

Abstract (Basic): WO 200144811 A2

NOVELTY - Light emitting composition comprises a polymeric matrix with a photoactive compound dissolved in it. After activation of photoactive compound, the rate of decrease in the intensity of light emission from said composition at any time during a 20-fold decrease in intensity is proportional to the intensity of light emission.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) a composition comprising polymeric particles of 20 nm-100 microm diameter having 2-10 wt.% of a dopant and a photoactive compound dissolved therein;

(2) a method for determining an analyte comprising: (a) providing in combination (i) a medium suspected of containing an analyte, and (ii) a first specific binding pair (SBP) member capable of binding to analyte or to a second SBP member to form a complex related to the presence of analyte, where at least one of the SBP members is bound to polymeric particles of about 20 nm-100 microm diameter having homogeneously dispersed therein 1-20 wt.% dopant and a photoactive substance; (b) activating photoactive substance; and (c) determining the effect of activation on the optical properties of the combination, the magnitude of effect being related to the amount of analyte in the medium;

(3) a method for determining an analyte comprising: (a) combining a sample suspected of containing an analyte with the particles and reagents that produce a color change in relation to the amount of analyte; and (b) activating the photoactive substance and relating the intensity of the light emitted to the amount of color change;

(4) a kit for use in an assay comprising (in packaged combination) reagents comprising at least one SBP bound to polymeric particles of 20 nm-100 microm diameter having incorporated 1-20 wt.% dopant and a photoactive substance; and

(5) a method of preparing particles comprising a polymeric matrix having a photoactive compound and 0.1-25 wt.% dopant comprises heating a mixture comprising (i) particles containing photoactive compound and (ii) dopant in an aqueous medium for a time and at a temperature and concentration sufficient to dissolve the dopant in the particles.

USE - For use in chemiluminescent, fluorescence and colorimetric assays in the detection of analytes in samples e.g. blood or biological fluids.

pp; 76 DwgNo 0/12

Derwent Class: A89; B04; E14; S03
International Patent Class (Main): G01N-033/53

38/7/8 (Item 2 from file: 351)
DIALOG(R)File 351:Derwent WPI

013871317
WPI Acc No: 2001-355529/200137
Purifying sperm cell DNA from a mixed sample, useful in forensic investigations, by capturing sperm cells on antibody-loaded support then lysing them

Patent Assignee: UNIV VIRGINIA PATENT FOUND (UYVI-N)
Inventor: DIEKMAN A B; HERR J C; KLOTZ K L
Number of Countries: 093 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200135759	A1	20010525	WO 2000US31771	A	20001117	200137	B
AU 200117787	A	20010530	AU 200117787	A	20001117	200152	

Priority Applications (No Type Date): US 99166073 P 19991117
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200135759	A1	E	39	A23J-001/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200117787	A		A23J-001/00	Based on patent WO 200135759

Abstract (Basic): WO 200135759 A1

NOVELTY - Purifying (M1) sperm cell DNA (I) by (i) treating a sample, containing sperm and other cells, with a binding substrate comprising an antibody (Ab) against a sperm-specific surface protein, linked to a solid support, washing the binding substrate, lysing bound cells and isolating (I).

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) device for isolating (I); and

(2) method (M2) for isolating individual sperm from a sample of mixed cells in which Ab is linked to a magnetic particle , individual sperm are identified by microscopy, then treated with a magnetic probe, and the probe placed in a reaction vessel where it is deactivated.

USE - The method is especially used to isolate (I) from forensic samples, in cases of sexual assault. A similar method (without cell lysis) is used to isolate/concentrate viable sperm cells, for forensic use or to overcome infertility problems associated with low sperm counts.

ADVANTAGE - The method is simpler than the conventional methods based on differential lysis (so easier to explain in court), improves speed and handling of forensic samples, and is compatible with automated robotic systems used for detection of short tandem repeats by polymerase chain reaction. It may be modified to allow isolation of single sperm cells (for identification of more than one assailant).

pp; 39 DwgNo 0/2

Derwent Class: B04; D16; S03; U11
International Patent Class (Main): A23J-001/00
International Patent Class (Additional): C07K-001/00; C07K-014/00; C07K-016/00; C07K-017/00; C12M-001/34; C12M-003/00; G01N-033/543; G01N-033/553; H01L-021/24; H01L-021/40

38/7/9 (Item 3 from file: 351)
DIALOG(R)File 351:Derwent WPI

013760618
WPI Acc No: 2001-244830/200125
Recovering target species from biological sample, useful especially for forensic isolation of sperm, by capturing it as covalent adduct with separation reagent
Patent Assignee: MIRAIBIO INC (MIRA-N)
Inventor: CHAPMAN W H; KLEVAN L
Number of Countries: 095 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200120042	A2	20010322	WO 2000US25423	A	20000915	200125	B
AU 200073829	A	20010417	AU 200073829	A	20000915	200140	
EP 1212465	A2	20020612	EP 2000961946	A	20000915	200239	
			WO 2000US25423	A	20000915		

Priority Applications (No Type Date): US 99154148 P 19990915
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200120042	A2	E	15	C12Q-001/68	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW

AU 200073829	A		C12Q-001/68	Based on patent WO 200120042
EP 1212465	A2	E	C12Q-001/68	Based on patent WO 200120042

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

Abstract (Basic): WO 200120042 A2

NOVELTY - Processing a biological sample (A) by treating it with a separation reagent (SR) to capture the target species (I), forming a covalent adduct (II) of SR and (I), then separating (II) from the sample, is new. SR comprises a microparticle and a receptor for a ligand on (I).

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) SR comprising a microparticle , receptor coupled to the particle and a photoaffinity label coupled to the receptor; and

(2) automated system for processing (A) by the novel method, comprising:

(a) means for providing SR of (1);

(b) means for reacting the sample with the SR to capture the target species;

(c) means for creating an adduct of the target species and the SR; and

(d) means for separating the adduct from the sample; and

(3) an apparatus for processing a biological sample, comprising:

(a) a chamber for receiving the sample;

(b) a capture means proximate to the chamber for capturing the SR;

(c) a second chamber in fluid communication with the first; and

(d) a second capture means proximate to the second chamber for capturing the SR.

USE - For isolating sperm cells from forensic samples for subsequent analysis of their DNA (claimed).

ADVANTAGE - Capturing (I) with a receptor provides a high degree of

selectivity, and permanent attachment as a covalent adduct makes possible complete separation of (I) from other components of the sample, e.g. epithelial cells of a victim. Microparticles have a large surface area for permanent attachment of a receptor, allowing efficient capture of most, or all, of (I), and magnetic separation eliminates the need for centrifugation , allowing complete automation of the process and highly reproducible results.

pp; 15 DwgNo 0/4

Derwent Class: B04; D16; S03
International Patent Class (Main): C12Q-001/68
International Patent Class (Additional): G01N-033/50

38/7/10 (Item 4 from file: 351)
DIALOG(R)File 351:Derwent WPI

013565553
WPI Acc No: 2001-049760/200106
Use of the polarization of fluorescence emission as a means for determining the location or orientation of photoactive moieties, e.g., for determining the conformation of proteins or DNA
Patent Assignee: MASSACHUSETTS INST TECHNOLOGY (MASI)
Inventor: BAWENDI M; EMPEDOCLES S
Number of Countries: 020 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200068669	A1	20001116	WO 2000US12006	A	20000503	200106	B

Priority Applications (No Type Date): US 99310009 A 19990511
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200068669	A1	E	34	G01N-021/64	

Designated States (National): CA JP
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Abstract (Basic): WO 200068669 A1

NOVELTY - Polarization labels are used to identify the location or three dimensional orientation of objects which absorb and emit light.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for:

(A) determining the orientation of a photoactive moiety (PM) which exhibits an anisotropic transition dipole and which exhibits spectral emission polarized along at most two dimensions, comprising:

(i) exposing the PM to a light source, to stimulate a spectral emission; and

(ii) correlating the emission with the orientation of the PM;

(B) creating an aggregate of PMs, comprising:

(i) entrapping the PMs in a solid, within which the PMs exhibit an oriented transition dipole; and

(ii) photobleaching a portion of the PMs so that the aggregate will then exhibit polarized light emission in response to light absorption;

(C) locating or identifying an item of interest, comprising:

(i) providing an item of interest with which a particle which has a characteristic spectral emission is associated, where the spectral emission of the particle is characterized at least in part by polarization;

(ii) exposing the particle to an energy source to stimulate the spectral emission; and

(iii) correlating the spectral emission with the item of interest;

(D) providing an identification unit, comprising:

(i) selecting an item of interest;

(ii) providing an identifier which comprises at least one particle which has characteristic spectral emission; and

(iii) providing one or more reactive moieties (RMs) attached to the surface of the particle, where the RMs are selected for their ability to be compatible with the item of interest, and where the spectral emission of the particle is at least characterized by polarization;

(E) tracking the motion of an item of interest, comprising:

(i) providing an item of interest with which at least one particle (which has a characteristic spectral emission which is characterized at least in part by polarization) is associated;

(ii) exposing the particle to an energy source to stimulate the spectral emission;

(iii) correlating the spectral emission with the item of interest; and

(iv) repeating steps (i)-(iii) at known intervals;

(F) tracking the change in orientation of an item of interest, while the item is in motion, comprising:

(i) providing an item of interest with which at least one particle (which has a characteristic spectral emission which is characterized at least in part by polarization in two dimensions) is associated;

(ii) exposing the particle to an energy source to stimulate the spectral emission;

(iii) correlating the spectral emission with the orientation of the item of interest; and

(iv) repeating steps (i)-(iii) at known intervals;

(G) tracking the change in conformation of an item of interest, while the item is in motion, comprising:

(i) providing an item of interest with which a plurality of particles (which have characteristic spectral emissions which are characterized at least in part by polarization) is associated;

(ii) exposing the particle to an energy source to stimulate the spectral emission;

(iii) correlating the spectral emission with the conformation of the item of interest; and

(iv) repeating steps (i)-(iii) at known intervals;

(H) tracking fluid flow, comprising:

(i) providing identifiers which exhibit emission of light polarized in one dimension in response to exposure to a primary light source;

(ii) exposing a predefined volume of the fluid to a primary light source, which emits polarized light, to stimulate the emission;

(iii) correlating the emitted light with the position and orientation of at least a portion of the identifiers; and

(iv) repeating steps (i)-(iii);

(I) PM which exhibits an anisotropic transition dipole and which exhibits emission of polarized light in response to energy absorption;

(J) library of items of interest, in which each item of interest has one or more identifiers associated with it, where the identifiers each comprise a particle with a characteristic spectral emission, and where the spectral emission is characterized at least in part by polarization;

(K) apparatus for detection the orientation of a particle or other item of interest, comprising:

(i) the particle, which exhibits anisotropic spectral emission;
(ii) a detector comprising:
(a) at least three beam splitting mirrors;
(b) a polarizing filter associated with each mirror, where each polarizer passes light of a different orientation, and
(c) at least one photon detector such as a photomultiplier tube or CCD; and
(iii) means to correlate the spectral emission with the orientation of the particle.
ACTIVITY - None given.
MECHANISM OF ACTION - None given.
USE - The processes can be used for tracking and identifying items of interest such as identification tags, security tags, consumer products, fluids, gases, solids, biomolecules or chemical compounds. They can be used for tracking the orientation of large biomolecules such as DNA or proteins.
ADVANTAGE - The processes allow measurement of the three-dimensional orientation of sub-diffraction limited objects.
pp; 34 DwgNo 0/3
Derwent Class: B04; J04; S02; S03
International Patent Class (Main): G01N-021/64
International Patent Class (Additional): G01N-033/58; G01P-005/20

38/7/11 (Item 5 from file: 351)
DIALOG(R)File 351:Derwent WPI

012755759
WPI Acc No: 1999-561876/199947
Methods and materials used to produce intraocular lenses
Patent Assignee: PHARMACIA & UPJOHN GRONINGEN BV (PHAA); PHARMACIA GRONINGEN BV (PHAA)
Inventor: DE GROOT J; DILLINGHAM K A; HOOD K A; HODD K A
Number of Countries: 084 Number of Patents: 006
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9947185	A2	19990923	WO 99EP1766	A	19990316	199947	B
AU 9934142	A	19991011	AU 9934142	A	19990316	200008	
BR 9908813	A	20001121	BR 998813	A	19990316	200065	
			WO 99EP1766	A	19990316		
CN 1293578	A	20010502	CN 99804036	A	19990316	200143	
KR 2001041835	A	20010525	KR 2000710123	A	20000914	200168	
JP 2002506690	W	20020305	WO 99EP1766	A	19990316	200220	
			JP 2000536424	A	19990316		

Priority Applications (No Type Date): SE 98853 A 19980316
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9947185	A2	E	29	A61L-027/00	

Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW

AU 9934142	A		Based on patent WO 9947185

BR 9908813	A		A61L-027/00	Based on patent WO 9947185
CN 1293578	A		A61L-027/00	
KR 2001041835	A		A61L-027/00	
JP 2002506690	W	35	A61L-027/00	Based on patent WO 9947185

Abstract (Basic): WO 9947185 A2

NOVELTY - A process for producing intraocular lenses comprises injecting a high-refractive index, low viscosity composition of crosslinkable units into an enclosure and initiating polymerization under pressure to create a synthetic polymer lens.

DETAILED DESCRIPTION - A method of producing an intraocular lens includes:

(i) introducing a solution into a lens forming enclosure, the solution comprising discrete crosslinkable units of a size small enough to provide an optically clear solution while contributing to a high refractive index of at least 1.39;

(ii) performing crosslinking between the units of the solution; and

(iii) forming a solid lens in the enclosure, optionally under forming pressure.

INDEPENDENT CLAIMS are also included for:

(1) a method of producing an intraocular lens in vivo comprising: (i) preparing a composition of discrete water soluble macromolecular particles; (ii) mixing the composition with water soluble photoinitiator and forming an opthalmically acceptable aqueous solution having a refractive index of at least 1.39; (iii) injecting the resultant solution into the capsular bag of the eye; and (iv) initiating crosslinking between the macromolecular particles by irradiation with a light of wavelength in the range of 380-700 nm to create a lens in the capsular bag;

(2) an opthalmically acceptable aqueous solution suitable for producing an intraocular lens as above comprising discrete crosslinkable units of a size small enough to provide an optically clear solution; and

(3) a kit-of-parts for preparing the solution as above just prior to injection into the lens production site comprising a composition of water soluble discrete crosslinkable units, a composition of a water soluble photoinitiator and a means for bringing the compositions together into the aqueous solution for suitable subsequent injection.

USE - The method is suitable for the production of a lens in-vivo in the human eye and in molds for conventional lens production. The modulus of the lens can be controlled by controlling the degree of crosslinking in the reaction and by selecting appropriate crosslinkable units. A high degree of freedom is possible in the selection of a suitable modulus for a patient.

pp; 29 DwgNo 0/0

Derwent Class: A14; A32; A35; A96; D21; D22; P32; P34
International Patent Class (Main): A61L-027/00
International Patent Class (Additional): A61F-002/16; C08J-003/28

38/7/12 (Item 6 from file: 351)
DIALOG(R)File 351:Derwent WPI

010410478 **Image available**
WPI Acc No: 1995-311621/199540

Detection and quantification of particle emissions from an emitter - by using producing large format high resolution digital image of the spatial distribution of detected emissions without use of lens

Patent Assignee: BAYLOR COLLEGE MEDICINE (BAYU); HOUSTON ADVANCED RES CENT (HOUS-N); MASSACHUSETTS INST TECHNOLOGY (MASI)
Inventor: BURKE B E; EGGERS M D; EHRLICH D J ; HOGAN M E; HOLLIS M A; KOSICKI B B; REICH R

Number of Countries: 019 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9523348	A1	19950831	WO 95US1725	A	19950209	199540 B
EP 746778	A1	19961211	EP 95911678	A	19950209	199703
			WO 95US1725	A	19950209	
JP 9509494	W	19970922	JP 95522366	A	19950209	199748
			WO 95US1725	A	19950209	

Priority Applications (No Type Date): US 94201651 A 19940225
Cited Patents: 3.Jnl.Ref; EP 421869; EP 583118; US 48824694
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9523348	A1	E	40	G01T-001/29	
Designated States (National): CA JP					
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
EP 746778	A1	E		G01T-001/29	Based on patent WO 9523348
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
JP 9509494	W		33	G01T-001/24	Based on patent WO 9523348

Abstract (Basic): WO 9523348 A

Detecting and forming images representing the particle emissions in an area of a sample (106) involves: (a) forming an array (110) of particle detectors, the array (110) having a particle detector area of size commensurate with the area of the sample to be imaged; (b) converting the particle emissions coming directly from the sample into photoelectrons in the detector; (c) collecting the photoelectrons in the detectors; and (d) forming an image of the collected electrons (122, 124, 126).

Also claimed is an appts. for forming an image representing particle emissions in an area of a sample.

USE - Process can be used (A) for detecting and quantitatively imaging radio-isotope, fluorescent and chemiluminescent labelled molecules e.g ligands such as toxins, venoms, bacteria, agonist and antagonist for cell membrane receptors , oligosaccharides, proteins, and monoclonal antibodies and DNa or RNA sequence analysis; (B) in medical and scientific applications; (C) detecting and forming images representing the particle emissions in an area of a sample; (D) ultrasensitive detection and quantification of particle emissions from an emitter to produce a large format high resolution digital image of the spatial distribution of detected emissions.

ADVANTAGE - It produces digital images in a min. amt. of time and expense. It offers high sensitivity, high throughput, linear response over a wide dynamic range, low noise, high quantum efficiency and fast data acquisition. Placing the image array close to the sample improves the collection efficiency by a factor of at least 10 over any lens based technique. Method is simple to perform.

Dwg.3/10

Derwent Class: B04; D16; S03
International Patent Class (Main): G01T-001/24; G01T-001/29
International Patent Class (Additional): G01T-001/164; H01L-027/14

38/7/13 (Item 7 from file: 351)
DIALOG(R)File 351:Derwent WPI

010159758
WPI Acc No: 1995-061011/199508
Introducing a biological substance into a target - using particles with a pure carbonaceous surface opt. a magnetic core as carrier for bombardment techniques
Patent Assignee: DCV BIOLOGICS LP (DCVB-N); DU PONT DE NEMOURS & CO E I (DUPO)
Inventor: FITZPATRICK-MCELLIGOTT S G; LAVIN J G; RIVARD G F; SUBRAMONEY S
Number of Countries: 019 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9501448	A1	19950112	WO 94US6440	A	19940615	199508	B
AU 9471021	A	19950124	AU 9471021	A	19940615	199520	
US 5466587	A	19951114	US 9385696	A	19930630	199551	
			US 94315309	A	19940929		
EP 706576	A1	19960417	EP 94920111	A	19940615	199620	
			WO 94US6440	A	19940615		

Priority Applications (No Type Date): US 9385696 A 19930630; US 94315309 A 19940929
Cited Patents: 03Jnl.Ref; WO 9100359
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9501448	A1	E	46	C12N-015/87	
Designated States (National): AU CA					
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
AU 9471021	A			C12N-015/87	Based on patent WO 9501448
US 5466587	A		19	C12N-015/00	Cont of application US 9385696
EP 706576	A1	E		C12N-015/87	Based on patent WO 9501448
Designated States (Regional): BE DE ES FR GB					

Abstract (Basic): WO 9501448 A

The following are claimed: (1) introduction of a biological substance into a target comprising: (a) associating the biological substance with a particle having a pure carbonaceous surface, the particle having a dia. sufficiently small to penetrate a target without killing it; and (b) inserting the particle into the target; (2) the introduction of exogenous nucleic acid into sperm comprising: (a) accelerating the particle in (1) to which is associated the exogenous nucleic acid, where the particle encapsulates a magnetic core and propelling the particles at the sperm so that they penetrate it; and (b) magnetically selecting the sperm into which the particles have penetrated; and (3) making a transgenic animal or non-human mammal, comprising: (a) accelerating the particle in (2); (b) magnetically selecting the sperm into which the particles have penetrated; (c) fertilising an egg with these sperm; (d) allowing the prod. of step (3c) to develop to term, where the progeny is capable of

expressing the exogenous nucleic acid.

USE - The particles are used to deliver nucleic acids, genetic constructs, toxins, pharmaceutical cpds., viruses, biological stains, organelles, vesicles, drugs, hormones and proteins into cells, germ cells, plants, microbes, microalgae, plants, organoids, animals, organelles and tissues (claimed). If transfer into the gene line is successful and the exogenous nucleic acid is expressed, the transgenic animal can be used for the prodn. of pharmaceutical proteins, disease models, and animals of improved health, appearance and/or stamina.

ADVANTAGE - The particles give greater accessibility and release of the biological substances to the target. The surface facilitates the association of a greater quantity of biological material to the target.

Dwg.0/9

Abstract (Equivalent): US 5466587 A

Method for introducing a biological substance into a biological target comprises (a) adsorbing the substance onto a particle encapsulating a dense metallic core with a pure carbonaceous surface, where the particle is small enough to penetrate a target without rendering the target non-functional and (b) inserting the particle into the target by accelerating the particle and propelling it at the target.

Biological substance is selected from nucleic acids, genetic constructs or proteins and the target is selected from germ cells, microbes, microalgae, plants, organelles, cells, animals, organoids and tissues. Dense metallic core is pref. magnetic .

USE/ADVANTAGE - Introducing substances into a target e.g. for making transgenic animals for producing substances in milk, blood and eggs, introducing sperm for artificial insemination. Facilitated gene integration into genomes. Precise animal models of human diseases can be generated. Overcomes disadvantages of size limitation.

Dwg.0/9

Derwent Class: B04; C06; D16; P14
International Patent Class (Main): C12N-015/87
International Patent Class (Additional): A01K-067/027; A61K-047/48
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